Air Force Research Laboratory | AFRL

Science and Technology for Tomorrow's Air and Space Force

HUMAN EFFECTIVENESS DIRECTORATE

BATTLE MANAGEMENT TRAINING EFFECTIVENESS: MCE INITIATIVE

BECKY BROOKS, PhD
WARFIGHTER TRAINING RESEARCH DIVISION (HEA)

Overview

- **Team Members**

- **Customers**

- **Objectives**

- **Preliminary Training Needs**

- **Air Synthetic Forces (AirSF)**

- **Status**

- **Growth Potential**

- **User Thoughts**

- **Industry Partner**

Modular Control Equipment (MCE)

Global Battlespace Information Sphere

Total Connectivity for Warfighting Decisionmaking

Team Members

- **Lab Personnel**
  - **Becky Brooks, Program Manager**
  - **Mike Conquest, Program Engineer**
  - **Maj John Davis, SME**
- **133 ACS, Ft Dodge, IA**
  - **Maj Dick Breitbach, IA ANG Program Manager**
  - **MSgt Bob Steffes, Engineering SME**
- **107 ACS, Phoenix, AZ**

Customers

- **Air National Guard**

- **ACC/DISG**

- **HQ FORSCOM**

- **325 TRS/DOX (Schoolhouse)**

Objectives

- **Engineering**
  - **Interface MCE With AirSF**
  - **Demo Potential To Interface MCE with DMT**
- **Training**
  - **Conduct Needs Analysis**
  - **Develop, Evaluate, Refine, and Transition Embedded Training**

- **Stand-Alone Proficiency Training**
- **Theater Certification Training (CMR)**
- **Air Battle Manager Training**
- **Joint Service Training Exercises (JSTEs)**
- **Maintenance**

Training Is Needed To Address All Levels of Training (Individual, Team, and Joint Service).

Preliminary Training Needs

- **Scenarios**
  - **Quickly Generated**
  - **Tailored to Meet Training Needs**
  - **Large Number of Players (Blue and Red)**
  - **Voice Recognition -- Comm With CGF Aircraft**
  - **Comm and Training With Manned Sims**
- **Reduce/Eliminate Requirement for Operators to Serve as "Drivers of the Dots"**
  - **"Dots" That Have Realistic/Enhanced Dynamics/Tactics**
- **Weapons Director/Air Battle Manager Train As A 5th Member of the 4-Ship**

Air Synthetic Forces (AirSF)

- **Computer Models of Military Pilots**
- **Provides Aircraft (Scenarios) For MCE Operators to Control**
- **Soar Speak Will Allow MCE Operators to Verbally Control AirSF Aircraft**

Status

- **Integrated With AirSF**
- **Sent Tracks To MCE Using AirSF -- June 98**
- **Next Steps:**
  - **Technical Documentation**
  - **Identify Industry Partner For Long Term Support**
  - **Identify External Funding**
  - **Training Research**
    - **Unique Training Opportunities**
    - **Distributed Training Issues**

Growth Potential

- **Enhancements and Expansion**
  - **Additional ACSs**
  - **AOCs**
  - **AWACS**
  - **JSTARS**
  - **ABCCC**
  - **UAVs**
  - **Rivet Joint**
  - **Etc**
- **Imagination/Creativity and Funding Are The Limiting Factors**

Industry Partner

- **Seeking A Collaboratory Industry Partner to:**
  - **Complete Integration of MCE With DMT**
  - **Provide Long Term Support on All MCE Equipment Throughout ACC and ANG**
- **AFRL To Transition:**
  - **Technology to ACC and Industry for Long Term Support**
  - **Future Technology Updates, Refinements, and Training Reseach**

User Thoughts

"This could change everything"

Capt Susan Huper (HQ ACC/DISG)

QUESTIONS?

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BACKUP SLIDES

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OPERATIONAL NEED

- **ACC and 552 ACW Wing Requirement to:**
  - **Provide Additional, High Fidelity Training Opportunities For Weapons Directors (WDs)**
  - **Increase Continuation Training Opportunities**
  - **Improve Overall Mission Crew Training**
- **ACC/DISG Directed by COMACC To:**
  - **Provide Distributed C2 Training Capability "On Demand"**
  - **Link all ACSs, AOCs, ABCCC, JSTARS, AWACS, and TACSSF to Provide High Level Battle Mgt Training**
  - **Train With "Man In The Loop"**
  - **Enhance Mission Rehearsal**

ACC DISTRIBUTED C2 TRAINING SITES

- **552 ACW (AWACS Simulators)**
- **6 Air Control Squadrons**

71 ACS	726 ACS
74 ACS	728 ACS
607 ACS	729 ACS

- **AOCs: 8AF, 9 AF, 12 AF**
- **ABCCC: 42 ACS**
- **JSTARS: 93 ACW**
- **TACSSF**